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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

MAYO III, WILLIAM H

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 07/17/2002

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/902,034

Applicant(s)

CONNOR ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 22 and 23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 20 is/are rejected.
- 7) ☒ Claim(s) 18-19 and 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-21 are drawn to an electrical compression connector, which is classified in class 174, subclass 84C.
 - II. Claims 22-23 are drawn to method of forming the electrical compression connector, which is classified in class 29, subclass 873.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the electrical compression connector can be made by cast iron molding or injection molding, rather than extrusion molding.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mark Harrington on July 3, 2002 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-21. Affirmation of this election must be made by applicant in replying to this

Office action. Claims 22-23 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Information Disclosure Statement

6. The information disclosure statement filed October 4, 2001 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the data sheets obtained from the web site do not contain the require dates of publication and therefore cannot be considered to be relevant prior to the filing date of the present application. It has been placed in the application file, but the information, specifically, the data sheets that are referred to therein have not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Drawings

7. The drawings are objected to because Figures 3-4 lack the proper cross hatching which indicates the type of materials which may be in an invention. Specifically, the cross-hatching materials that indicate the conductor and connector materials are improper. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials.

8. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Correction is required.

Specification

9. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Specifically, the applicant refers to a second and third lateral sides in claims 1, 8-9, and 14, however the specification only provides antecedent basis for a first and second lateral side, therefore there is no proper antecedent basis for the third lateral side.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 1 recites the limitation "opposite respective second and third lateral sides" in line 8, which is confusing and renders the claim indefinite. It is unclear whether the applicant intended to refer to the "first and second lateral sides" or if he/she is introducing a new lateral side. If the applicant is referring to the specification-supported terms "first and second lateral sides", then he/she should recite the term with consistency in the claim.

13. Claim 8 recites the limitation " the second and third lateral sides" in lines 3-5, which is confusing and renders the claim indefinite. It is unclear whether the applicant intended to refer to the "first and second lateral sides" or if he/she is introducing a new lateral side. If the applicant is referring to the specification-supported terms "first and second lateral sides", then he/she should recite the term with consistency in the claim.

14. Claim 9 recites the limitation " the third lateral sides" in line 3, which is confusing and renders the claim indefinite. It is unclear whether the applicant intended to refer to the "second lateral side" or if he/she is introducing a new lateral side. If the applicant is

referring to the specification supported terms "second lateral side", then he/she should recite the term with consistency in the claim.

15. Claims 2-7 and 10-14 are depended upon a rejected claim and therefore are rejected.

Treatment of Claims

16. Based on the support in the specification, the examiner assumes that the applicant intended to refer to the "first and second lateral sides" when he/she recites the "second and third lateral sides".

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 1-5 and 7-11 rejected under 35 U.S.C. 102(b) as being anticipated by Schrader et al (Pat Num 5,200,576, herein referred to as Schrader). Schrader discloses an electrical compression connector (Figs 1 & 4) for securing at least three conductors or cables in place (abstract). Specifically, with respect to claim 1, Schrader discloses an electrical compression connector (10) comprising a first section (upper half of 12) having a first conductor receiving channel (18) extending into a top side of the

Art Unit: 2831

connector (10) and a second section (lower half of 12) integrally formed with the first section (upper half of 12), wherein the second section (lower half of 12) has a second receiving channel (26) and a third receiving channel (28) extending into opposite respective first and second lateral sides (left and right sides respectively) of the connector (10), wherein the second conductor receiving channel (26) comprises opposing concave surfaces (denoted in red by 100 & 200) having different shapes (the top curved surface 100 is narrower than the bottom curved surface 200). With respect to claim 2, Schrader discloses that the first section (upper half of 12) comprises a generally U shape (area between legs 14 & 16, Fig 1). With respect to claim 3, Schrader discloses that the first and second sections (upper and lower halves of 12) are integrally formed as a body member (12). With respect to claim 4, Schrader discloses that the first, second, and the third conductor receiving channels (18, 26, & 28, respectively) extend generally parallel to each other (see 18, 26, & 28 in Fig 1). With respect to claim 5, Schrader discloses that a first one of the concave surfaces (100) has a first radius of curvature (denoted in red as R_1) and a second one of the concave surfaces (200) having a second different radius of curvature (denoted in red as R_2). With respect to claim 7, Schrader discloses that the second section (lower half of 12) comprises a curved cantilevered leg (20 & 24) having a top surface (located at 200) forming the second one of the concave surfaces (200). With respect to claim 8, Schrader discloses that an aperture is provided between a tip (denoted as 300 in red) of the cantilevered leg (20 & 24) and an opposing surface (denoted as 400 in red) of the first lateral side (left side of connector) and wherein another aperture is provided

through the second lateral side (right side of connector) into the third conductor receiving channel (28). With respect to claim 9, Schrader discloses that the second section (lower half of 12) further comprises a fourth conductor-receiving channel (30) extending into the second lateral side (right side of connector) of the connector (10). With respect to claim 10, Schrader discloses that the second section (lower half of 12) comprises a curved cantilevered leg (20 & 24) having a top surface (denoted as 500 in red) that forms a portion of the fourth conductor-receiving channel (30). With respect to claim 11, Schrader discloses that the third conductor-receiving channel (28) comprises opposing concave surfaces (top and bottom of 28) having the same shape (Fig 4).

The claim limitation of "extruded" recited in claim 3, is considered to be a method of forming the device and is not germane to the issue of patentability of the device itself. Specifically, it has been held that the presence of process limitations in product claims, in which the product does not otherwise patentability distinguish structurally over the prior art, cannot impart patentability to the product itself. *145 CCPA 656 (CCPA 1965)*

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schrader (Pat Num 5,200,576) in view of Burndy Electrical, a technical data sheet describing the YH3429 Connector (herein referred to as Burndy). Schrader discloses an electrical compression connector (Figs 1 & 4) for securing at least three conductors or cables in place (abstract) as disclosed above with reference to claim 1 above. Specifically, with respect to claim 12, Schrader discloses a second connector-receiving channel (26) comprising a side surface between the two opposing concave surfaces (100 & 200 respectively) having a round shape (Fig 4).

However, Schrader doesn't necessarily disclose the side surface between the two opposing concave surfaces being substantially flat shaped (claim 12).

Burndy teaches a YH3429 Connector (Fig 2), that is known and commercially available for making parallel and tap connections, including combinations of copper Class 1 flexible stranding and code conductors. (see interactive product catalog page). Specifically, Burndy teaches that the YH3429 connector (Fig 2) comprises a second connector receiving channel (denoted as Tap 1) comprising a side surface (see attached drawings detailing the area in red) between the two opposing concave

Art Unit: 2831

surfaces (upper and lower surfaces in the second connector receiving channel) that has a substantially flat shaped portion for accommodating tap conductors in the range of 1/0 AWG to 250 Kmil (see interactive product catalog page).

With respect to claim 12, it would have been obvious to one having ordinary skill in the art of cable connectors at the time the invention was made to modify the connector of Schrader to comprise the second conductor receiving channel configuration comprising a side surface having a substantially flat shape portion as taught by Burndy because Burndy teaches that such a configuration is well-known for accommodating tap conductors in the range of 1/0 AWG to 250 Kmil and commercially available for making parallel and tap connections, including combinations of copper Class 1 flexible stranding and code conductors (see interactive product catalog page) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

22. Claim 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrader (Pat Num 5,200,576) in view of Applicant's Own Admission (herein referred to as AOA). Schrader discloses an electrical compression connector (Figs 1 & 4) for securing at least three conductors (i.e. conductor assembly) or cables in place (abstract). Specifically, with respect to claim 15, Schrader discloses an electrical compression connector (10) comprising a first generally U shaped section (area between legs 14 & 16, Fig 1) forming a first conductor receiving channel (18) and a second section (lower half of 12) integrally formed with the first U shaped section (area

between legs 14 & 16, Fig 1), wherein the second section (lower half of 12) has a second receiving channel (26), wherein the second conductor receiving channel (26) comprises opposing first and second concave surfaces (denoted in red by 100 & 200, respectively) each of the concave surfaces (100) having a different radius of curvature (denoted in red as R_1 and R_2), wherein the second section (lower half of 12) has a bottom curved cantilevered leg (20 & 24) that forms the second concave surface (200), wherein any sized electrical conductor (not shown) may be located in the second receiving channel (26, Col 2, lines 13-15), wherein when the connector (10) is compressed onto the conductor (not shown), the leg (20) is deformed towards the first contact surface (100, Fig 4, Col 2, lines 19-26). With respect to claim 16, Schrader discloses that the second section (lower half of 12) comprises a third conductor receiving channel (28) on the opposite side (right side) of the second receiving channel (26), wherein the third receiving channel (28) has a smaller size than the second conductor receiving channel (26, Fig 4). With respect to claim 17, Schrader discloses that the second section (lower half of 12) further comprises a fourth conductor receiving channel (30) on the opposite side (i.e. right side) of the second receiving channel (26) and located below the third conductor receiving channel (28), wherein the fourth conductor receiving channel (30) has a smaller size than the third receiving channel (28, Fig 4).

However, Schrader doesn't necessarily disclose the electrical conductor being a class K electrical conductor located in the second conductor-receiving channel (claim 15).

AOA teaches under the heading "Brief Description of Prior Developments", that class K conductors are commercially available and are commonly utilized in cable connectors because they are more flexible than Class I conductors (see Page 1 of specification, lines 27-28).

With respect to claim 15, it would have been obvious to one having ordinary skill in the art of cable connectors at the time the invention was made to modify the connector of Schrader to comprise a class K electrical conductor in the second conductor receiving channel as taught by AOA because AOA teaches that such a conductor is commercially available and is commonly utilized in cable connectors because they are more flexible than Class I conductors (see Page 1 of specification, lines 27-28).

The claim limitation of "extruded" recited in claim 15, is considered to be a method of forming the device and is not germane to the issue of patentability of the device itself. Specifically, it has been held that the presence of process limitations in product claims, in which the product does not otherwise patentability distinguish structurally over the prior art, cannot impart patentability to the product itself. *145 CCPA 656 (CCPA 1965)*

23. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schrader (Pat Num 5,200,576) in view of AOA (herein referred to as modified Schrader), as applied to claim 15 above, further in view of Burndy Electrical, a technical data sheet describing the YH3429 Connector (herein referred to as Burndy). Modified Schrader discloses an electrical compression connector (Figs 1 & 4) for securing at

least three conductors or cables in place (abstract). Specifically, with respect to claim 20, modified Schrader discloses a second connector-receiving channel (26) comprising a side surface between the two opposing concave surfaces (100 & 200 respectively) having a round shape (Fig 4).

However, modified Schrader doesn't necessarily disclose the side surface between the two opposing concave surfaces being substantially flat shaped (claim 20).

Burndy teaches a YH3429 Connector (Fig 2), that is known and commercially available for making parallel and tap connections, including combinations of copper Class 1 flexible stranding and code conductors (see interactive product catalog page). Specifically, with respect to claim 20, Burndy teaches that the YH3429 connector (Fig 2) comprises a second connector receiving channel (denoted as Tap 1) comprising a side surface (see attached drawings detailing the area in red) between the two opposing concave surfaces (upper and lower surfaces in the second connector receiving channel) that has a substantially flat shaped portion (Fig 2, see enlarged drawings) for accommodating tap conductors in the range of 1/0 AWG to 250 Kmil (see interactive product catalog page).

With respect to claim 20, it would have been obvious to one having ordinary skill in the art of cable connectors at the time the invention was made to modify the connector of Schrader to comprise the second conductor receiving channel configuration comprising a side surface that has a substantially flat shape as taught by Burndy because Burndy teaches that such a configuration is well-known for accommodating tap conductors in the range of 1/0 AWG to 250 Kmil and commercially

Art Unit: 2831

available for making parallel and tap connections, including combinations of copper Class 1 flexible stranding and code conductors (see interactive product catalog page) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

Allowable Subject Matter

24. Claims 6 and 13-14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

25. Claims 18-19 and 21 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

26. The following is a statement of reasons for the indication of allowable subject matter: This invention deals with an electrical compression connector having a second radius of curvature that is about 25% smaller than the first radius of curvature (claims 6 & 18). This invention also deals with an electrical compression connector wherein the third conductor receiving channel comprises two opposing surfaces and a side surface between the opposing concave surfaces having a substantially flat shape (claims 13 & 21). The above stated claim limitations, in combination with other claim limitations, is not taught or suggested by the prior art of record. Claims 14 and 19 are depended upon claims 13 & 18 and therefore would be allowable if the above conditions are met.

Conclusion

27. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Levinski (Pat Num 3,354,517), Brenner (Pat Num 2,956,108), Peek (Pat Num 3,781,459), Schrader (Pat Num 5,103,068), Piriz (Pat Num 5,635,676), Schrader et al (Pat Num 5,036,164), Campbell et al (Pat Num 4,350,843), Wilcox (Pat Num 6,261,137), Schrader et al (Pat Num 5,162,615), Zemels (Pat Num 3,322,888), Toedtman et al (Pat Num 2,938,069), and Piriz et al (Pat Num 5,396,033), all of which disclose electrical compression connectors.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30 a. m.-6:00 p.m.(alternating Friday's off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-1341 for After Final communications.

Application/Control Number: 09/902,034
Art Unit: 2831

Page 16

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

A handwritten signature in black ink, appearing to read "William III", with a stylized flourish at the end.

WHM III
July 11, 2002